

## I. QUICK START GUIDE FT-3

### A. Manual Startup

1. Turn the Master switch to the On position. Place the E-Stop button in the extended position. Press the Reset button.
2. Turn the Control Mode switch to the Manual position.
3. Turn the Pilot Gas switch to the On position and then to the Ignite position. Return to the On position once the pilot gas has been ignited. This can be confirmed either visually or by a rising pilot temperature.
4. Turn the Inlet Valve switch to the Open position, which will open the valve and allow the landfill gas to flow to the flare.
5. Turn the desired Blower switch(es) to the Manual position, which will start the gas blower.

**Note: It is VERY IMPORTANT to monitor the landfill gas ignition in the next step, since large volumes of gas can be sent to the flare. If the temperature does not change within the time specified, discontinue the Startup immediately. Then determine why the landfill gas failed to ignite.**

6. The landfill gas will be ignited. The flame can be confirmed either visually or by a rising process temperature. The process temperature should begin to rise in 1 to 2 minutes.
7. Turn the Pilot Gas switch to the Off position.
8. The utility flare system is now operating in manual mode.
9. The flare can be shutdown by turning the Master switch to the Off position or by pushing the E-Stop button.
10. The control system is equipped with a Manual Max Run Timer. This timer is activated once the system is switched to the manual mode. If the system is left running for an extended period of time in the manual mode, the timer will eventually shut the system down.

**Note:** The flare system should not be left operating unattended in manual mode as all system permissives and safety shutdowns are bypassed.

## **B. Automatic Startup**

1. Check the pilot temperature control setpoints.

The control system uses two signal outputs which are used to sequence events during start-up. These are:

- a. Blower-On Temperature - Factory set to 300 °F. This is the temperature at which the blower will be started and the header valve opened.
- b. Pilot-Off Temperature - Factory set to 400 °F. This is the temperature at which the pilot gas solenoid will be closed, shutting off the pilot.

2. Check the Pilot Timer setpoint.

The purpose of the Pilot Timer is to specify a set period of time to allow the pilot system to attain the pilot-off temperature. For instance, if the Pilot Timer has been set at five minutes and the pilot-off temperature is set at 400 °F, the pilot will have five minutes to heat the thermocouple to 400 °F. If the pilot system fails, due to an exhausted pilot gas supply or other reasons, to attain the pilot-off temperature in the time period allotted the entire system will shutdown.

3. Check the Ignition Timer setpoint.

The purpose of the Ignition Timer is to control the sparking period of the spark plug during start-up. This timer has been set at the factory at fifteen seconds which allows a constant sparking action by the igniter for this period of time. This should be adequate time to purge the pilot gas line of air and ignite the pilot gas. This timer should never need to be altered.

4. Turn the Master switch to the On position and press the Reset button. Place the E-Stop button in the extended position.

5. Turn the Control Mode switch to the Auto position. The control system will now run through the automatic start-up sequence.

Once the automatic startup is completed, all permissives and shutdowns of the system are activated. For operation of the system beyond this point refer to the Control System Operation section of this manual.